

Abstract

The invention is isolated nucleic acid molecules encoding Na^+/H^+ exchanger polypeptides for extrusion of monovalent cations (preferably lithium ions and potassium ions, most preferably sodium ions) from the cytosol of cells to provide the cell with increased salt tolerance. In a preferred embodiment, the nucleic acid is obtained from *Arabidopsis thaliana*. Crop species transformed with the nucleic acid molecule are capable of surviving in soil with high salt levels that would normally inhibit growth of the crop species.